DESIGN AND TESTTING OF A STAFF CONTACT WEBBASE
MANAGEMENT SYSTEM, A CASE OF MINISTRY
OF INTERNAL AFFAIRS, IMMIGRATION
DEPARTMENT

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PROJECT REPORT SUBMITED TO THE COLLEGE OF APPLIED SCIENCES AND
TECHNOLOGY IN A PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF A BACHELOR'S DEGREE OF INFORMATION
SYSTEM AND INFORMATION TECHNOLOGY OF
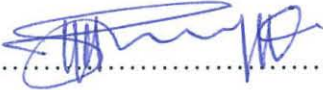KAMPALA INTERNATIONAL UNIVERSITY

SEPTEMBER 2013

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DECLARATION

The researchers AYO SANFORD AND ARWAI DANIEL do declare that to the best of our knowledge and ability this project report is our original work and has never been presented to any institution for any academic award.

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APPROVAL

This project report is to be submitted to the College of Applied Sciences and Technology Kampala International University under my supervision as the University supervisor.

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Date: 0/10/ 2013 ....

MR.Businge Phelix Mbabazi

ACKNOWLEDGMENT

We thank our almighty Father for the strength and good health which has enabled us to come this way and achieved the long awaited dream of accomplishment of the degree.

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ABSTRACT

Abstract is a document designed to show a review of whatever the designers tackled on during designing processes of the project proposal. It summarized the content in all chapters. This project comprised of five chapters that is, chapter one which included a number of sub topics like background, problem statement and also objectives discussed with in this chapter, the justification of the study to mention but a few. Chapter two covered literature review that described the review of literature relating to some writers and scholars plus other researchers and designers. Chapter three described the methodology including both the physical and logical techniques used and even the tools applied during the design of the final report. The design basically related to what other writers and designers say about what and so on and so forth. Chapter four included system development and testing which illustrates the system development life cycle up to the end, lastly chapter five described system evaluation including the design lay outs of the system the problems encountered during the development phase and lastly the recommendations made. It is helpful to the user as well since it produced the information required for the project design. After passing through, we were being able to understand the system use and its effectiveness. In the appendices, the methods used like the questionnaire, Time Frame and the proposed Budget for the project.

CHAPTER ONE

THE PROBLEM AND ITS SCOPE

1.0 Introduction

This chapter explains the problem of not having staff contacts web base management system for Ministry of Internal Affairs, Immigration Department and why it is important to apply computer examination and analytical techniques in the interest of determining the potential öf using staff contacts systems for competetiveness in the Ministry of Internal Affairs,Immigration Department in Uganda.

1.1 Background of the study

Over the years Ministry of Internal Affairs, Immigration Department has not established a reliable, efficient staff contacts web base management system. The Ministry was established in 1962. Ministry of Internal Affairs is not an associate of any Ministry (Uganda); Ministry of Internal Affair Immigration Department is similar with other Ministries.

Ministry of Internal Affairs Immigration Department has its Head office in the centre of Kampala, Uganda's capital, at Jinja Road, Plot. Portal Avenue. Operations office is at Jinja road has its own District base offices all over the country, with highly trained Immigration staff who carry out daily duty and monthly report submission to ensure a high standard of works on all our activities. For major ministry programs, activities, sub-systems and/or components are sent to ministry of foreign in Kampala, and other outside world. All ministry programs are government programs.

New Technological Areas in the ministry will enable Human Resources Office works easy on tracking laze staff who fails to report on duty to attain to customer or Clients service areas ranging from check-in desks to management. Furthermore, ministry of Internal Affair will able to integrate internal systems. The drastic effect in the year 2012 on staff contact system forced database to reappraise their performance, focusing sharply on e-commerce. Staff contact webase management system online services can be configured to include specialist applications such as staff contact site, for example – to make the site easier to navigate and use;

The majority of the staff in the ministry of internal affairs in Kampala passes through entry gates check up, but there are others without and these include Minister, Permanent Secretary, commissioners, and Head of Departments. District staff services will be monitor using the designed system.

All these district staff has no online staff contact management systems and some provide telephone reservation services. Clients will be advised to visit the various staff contact websites for details regarding staff contacts.

The telecommunications industries have come a long way. The contact systems of the 21st century has at its fingertips sophisticated desktop and Internet technology, in the form of powerful personal computers and connection to a wealth of information on corporate intranets, through e-mail and the Internet. In the ministry, circumstances have changed in recent years in a way that suggests that now competition is more important. In the immigration department, the pressure to provide better customer service has never been greater. Yet the number of staff is equally small. Staff contact systems automation can play a key role in attaining these goals, and today many innovative solutions are available to assist.

Staff contact systems will have to continue as an on-line distribution, information less travel, self-service information passing and smart program. There is a great opportunity for the integration of staff contact and database systems, along with new applications for biometric security, electronic passports, wireless documents tracing and much more.

According to Kelemen (2003), to meet these challenges, there are plenty of software solutions that help staff details both convenient and easy. A good information system enables operation to run efficiently, while emphasizing customer service. Technology has the potential to answer the demands of the public – increasing the level of security, without creating excessive time delays and without adding significantly to the cost of system. No doubt, the research on these topics will go on as the ministry continues to evolve in the future.

1.2 Statement of the Problem

The increasing number of immigration staff and lack of staff contact web base management system has resulted into delays in getting staff contacts and details, increasing commotion while manually process staff information, delay in signing arrival books, poor data security while all the information is kept paper wise and time delays.

1.3 Purpose of the study

The main purpose of the study will be to design and implement staff contact web base management system for the ministry of internal affairs immigration department to enable staff agents get access to reservation systems for making better arrangements, be able to view current reservations and check clients need as well as arrival time for duty.

1.4 The Goal of the study

The major goal will be to design and implement staff contact web-base management system for competitive advantage in the ministry of internal affair Immigration Department.

1.4.1 Specific Objectives

i) To examine Possible Choices for improving staff contacts web base management Systems for the ministry and districts.

ii) To investigate the challenges involves when designing staff contact webbase for comperative advantage of the ministry of Internal affairs,immigration department.

iii) To examine various new information system technologies used in the ministry of internal affair immigration departmrnt.

Iv) To design and test the new system which will be able to handle staff contact information on a web base.

v) To implement the new system.

1.5 Research Questions

(i) What are the limitations, advantages and disadvantages for using staff contact webbase management system in the ministry of internal affair immigration?

(ii) What are the benefits of using staff contact webbase management systems in the departmrnt?

(iii) What are the possible Choices for improving staff contact web base management Systems for ministry and district offices?

1.6 Scope of the study

This will specify the boundaries of the research. **Time scope:** our research will take a period of 5 months from January to August of year 2013 **Content scope** will concentrate on staff contact that enable staff agents get access to reservation systems for making better arrangements, be able to view current reservations and check clients need as well as arrival time for duty. **Geographical scope:** the study will take place at the ministry of internal affairs immigration department Headquarter in Kampala, Jinja Road.

1.7 Justification of the study

1) The project will help the users to easily identify the details about every staff within the immigration department.

2) It will help the users to electronically capture, store and retrieve the data easily within the system.

3) Staffs will be able to check for their information easily from the system.

4) The study will help the researchers to learn and have more knowledge about a web base database.

5) It will help researchers attain Bachelor in Information Technology and Bachelor in Management information Systems since its one of the requirement for the award of the Degree.

1.8 Limitations of the study

1) The study ought to face a lot of limitations that may affect its smooth running and hence may not be finished in the required time. These are;

2) Some of the staff members who will to be interviewed may be absent, which delay the researcher will have to move to the next stage of the project.

3) The project will be costly in terms of finance, accrued from transport.

4) It will be difficult to convince some of the staff members about the needs of developing a new system since most of them had no knowledge about the importance of the information system.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter emphasizes the review of existing literature basing on the stated objectives. It reviews the past work for other researchers, the methodologies they used, and all in all the definition of the objectives while relating it to the design of the new system.

An information system

A system is a group of interrelated components working together towards a common goal by accepting inputs and producing outputs in an organized transformation process (O'Brien, 2000).

Adelman, C. (2000), information systems is a set of interrelated components that collect (or retrieve), process, store, and distribute information to support decision making, coordination, and control in an organization.

2.1 Information System developments on staff contacts web base management system for ministry of internal affairs immigration department

The staff contact will increasingly depend on automating processes which improves efficiency. This cuts costs and frees staff for more profitable activities. It also plays an important role in enhancing business knowledge, collecting data as transactions are processed and delivering valuable management information that can help online staff contacts reservation system that shape their marketing strategy. Other areas of office operation can also benefit from some of the same processes and e-commerce integration expertise. Staff contacts web base database, for instance, requires rapid, streamlined communication with business partners Anderson, D. (2000) However faster automating processes have to be developed so as to further increase the speed of processing transactions in order to be able to cope with the increasing number of clients travelers.

Nowadays staff contacts web base data base is at the very early stages of leveraging the power of the Web. The first initiative taken by immigration is to improve their websites. Three pieces of information most staffs require are the local connection, the local network and the exchange time. A good number of immigration websites' currently do not provide this information sufficiently.

Through closely monitoring and collecting information on their stakeholders, immigration staff can provide data on the local community to visitors and vice-versa, for example, it is possible for a first time visitor to a particular city to obtain a list of good restaurants from websites. The facilities vary considerably with the airports and the airliners that use that airport instance, for instance most if not all airports have health facilities, currency exchange booths, duty-free shops and restaurants. Other tenants could provide travel-related services such as rental cars, hotel services, tour operators etc. Airports also provide a variety of services to airlines, including air-traffic control, baggage and cargo handling, catering, and handling terminals and hangers. Lastly, they provide facilities to Government departments for immigration, customs and possibly health services.

O'Brien, J. (2001). Although IT has been long at the heart of every airline operation, the truth is that now it is time to reorganize the future of the industry. This future will be characterized by three critical success factors – lower costs, increased profitability and improved levels of customer service. The researchers intend to design a dynamic website as part of the online ticket reservation system that will contain information about the local community ranging from weather, local time and the exchange rate.

2.2 Possible Choices for improving staff contacts information systems for immigration

Many government staff are currently re-organizing and investing strongly in technologies focused on improving customer service changing from self-service kiosks to check-in via mobile phone services, to baggage and management services, to electronic visas and e-mail. For activities, the prime objective remains, optimizing revenues while maximizing customer relationships. What has changed is the variety and scope of channels available for distribution that the immigration wants to control. Staff contact electronic systems must be integrated with frequent monitoring programs and yield management will continue to develop as clients' demands for information, competitiveness and transparency increase Schultheis, S. (1989).

2.3 Simplify staff arrival and departure time

One possible goal is to simplify the staff appraisal process. Through the use of a Common Language Front-end to host check-in systems, agents and staff see the same screens no matter what host system they access. Agents sign in only once, after which hosts are accessed by simply entering the flight number associated with that host.

Using system-wide information available from each Centralized check-in host and easy-to-use presentation, the staff will have automation that is dedicated to customer service. Latest Check-in solutions incorporate the latest computer capabilities to help airport staff perform both simple and difficult passenger check-in transactions.

For example, graphical windows-style presentations simplify passenger check-in. User prompts, color-coded screens, drop-down menus and dialogue boxes allow agents with minimal training to quickly complete passenger check-in. Editing checks at the desktop level prevent wasted typing and considerably reduce transaction costs. Within seconds, data is displayed on the screen, and agents can verify passenger requests for special services. In this way passenger and baggage check-in is quick and requires minimal agent interaction.

2.4 Internet Technology on online staff web base system for competitiveness

Internet Technology has become a major enabler for aviation to work effectively and safely, while achieving substantial cost savings. If Internet Technology plays a critical role in determining how the online ticket reservation facilitates airlines to compete with one another, there is also a need for it to serve common purposes. At present carriers have two main strategic goals: to get closer to their customers and to reduce costs. And they are looking to Internet Protocol to facilitate that.

2.5 Secure staff web base management system Initiative to Increase staff Security

Schultheis, S. (1989), Major section in many Departments have teamed up with world leading smart card and biometrics integration companies to develop and try a 'secure-means of' initiative. The secure staff contact data base project aims to achieve the highest level of identity verification for frequent staff contact and to contribute to a secure global staff contact web base data base system. The European Commission and a Swiss-funded consortium will undertake trials in Europe, with a view of expanding the initiative globally.

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Secure staff contact web base data base will include digital authentication to enable secure access to arrival and departure terminals' facilities for frequent services. The project team will develop and implement systems to authenticate staff at both check-in and log out time stages. The solution will also enable effective control of office and work access to restricted areas, as well as electronic access to computer systems. To ensure the provision of inter operable global solution.

2.6 Empower Immigration Staff Contact web base management system

Latest Check-in solutions provide staff with much more versatility than ever before. The graphical screens let immigration staff customize them to best fit its check-in and operational environment. Changes can be made quickly and easily and can be adapted to one location or all locations, depending on the needs of each arrival and departure terminal.

As Immigration Department evolves, its applications are increasingly integrated within an IP environment. Vendors' range of integrated department solutions and applications covers every step of the services. This includes login and logout; services movement, department passport check-in, departure control and management; Office management and operations; and staff data base maintenance and engineering Schultheis, S. (1989).

Immigration department, computer operator, or independent company supplying ground handling support for other section, want to provide the best service possible, vendors provide the capability for immigration to focus on customer service. They no longer need to concentrate on the computer processing aspects of their job, but the system provides additional information, special promotions, and personalized service to customers.

Offering IP access, these value-added solutions improve the staff experience, streamline, and integrate new system and operations. They also enable efficient communications to support computer maintenance, safety and security processes. Staff data base systems integration capability brings together existing branches and third-party products in order to provide vendor-independent, best-in-class solutions. These enable department to benefit from greater efficiency and effectiveness, including improvements in services delivery, cash flow coupled with profitability, as well as safety and service. For logistics management, staff has developed a new solution extending applications over an extranet, helping to improve services management

efficiency while reducing costs through the use of Internet technologies. Staff provides a range of data, voice and fax communications solutions for passport services.

2.7 Conclusion

The staff contact web base data base, information and telecommunications industries have come a long way in Secure and stable systems which are vital to the ministry hence designing an architecture specifically suited to the nature of the service which often requires more users to access and use the system simultaneously. Staff contact web base data base automation also plays a key role in attaining these goals, and today many innovative solutions are available to assist.

2.8 Case study one: Adam's Application in United States of America.

Dauntless Software produces programs for pilot flight training through Adam's Applications in the United State of America. Their staffs are based globally and so a web-based system was needed for managing timesheets and expenses claims. Adam's Applications developed a tailor-made, private website to allow staff to login and enter the relevant details. When company managers log in to the system it calculates the amount each staff member is owed and provides all the necessary accounting functions. But this did not solve their problem successfully because the study Areas were to large that, though they finished the research it was not easy to manage the system planning, building and testing.

Case Study Two: Lincolnshire County Council Contact Center in England.

A lack of systems integration meant that faults reported by the public to the Lincolnshire County Council's (LCCs) contact centre were often hard to identify or too general, with LCC inspectors and contractors spending unnecessary time and money determining the exact location of the fault, particularly in rural areas.

The contact centre was also unable to identify if a works order had already been created, causing potential duplicate requests.

LCC needed a cohesive system that could streamline these processes and deliver cost and efficiency savings. Integrating PBBI's MapInfo Stratus and Confirm solutions with its existing

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SAP CRM database enabled LCC to use web mapping to simplify reporting, improve the geographical accuracy of work orders, and provide better information to the public about repairs.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter focused on a planned structure or detailed of how the researchers carried out their work. It also emphasized on the methodology including tools and techniques that were used during the development of the new staff contacts web base management system.

3.1 Analytical tools and design

The researchers used prototyping method where by data were collected from the department files and members, organized and represented in a format that were good to illustrate the flow of the whole work and even the nature of the project. Layouts were made to ensure that the system is designed in accordance to the specification of the system owners.

3.1.1 Research Design

This study used both descriptive and analytical survey in nature. This study were elaborated the different views on analyzing using staff contacts web base management systems for competitive advantage in the department. A survey designed was employed because the researchers got views from respondents about the study. These research designs were useful because the researcher intended to find out the challenges of using staff contact web base management systems for competitive advantage in the ministry.

3.2 Study Population

The study was carried out on staff in immigration department and her communication reservation systems for competitive advantage.

3.3 Sampling procedure

Simple random sampling methods were used to select a sample from the population. Non probability sampling design where all members from a study population were given equal chances of being selected as respondents was also use.

3.3.1 Sample Size

The study involved a purposive sampling research data collection because we choose the sample based on whom we think were appropriate for the study. Therefore, we were using this primarily because there were a limited number of people that have expertise in the area of research. The first stage was involved selecting the population of the study. Secondly the researchers identified the potential respondents were included staff and executive officer. From each department two respondents were selected to constitute a sample size to 60 respondents.

3.4 Research Instruments

3.4.1 Questionnaire

The researchers used a printed document to the immigration which contains standardized questions that were used for answere by the users of the current system and some of the staff.

The method were used because, it enabled the respondents to answer the questions in their free time and it creates an opportunity for getting accurate information since it was designed using simple statements that were straight forward.

3.4.2 Interview

With this method, the researchers visited the immigration offices and carried out interviews on the staff. This enabled the researchers to get information about the staff contact web base management system being used and how the records kept. From this, the researchers will analyze the system.

3.4.3 Internet and reading available Documents

The growing popularity of the Internet brought a major shift in Electronic Data Reporting and data collection. The researchers took advantage of the internet being an ocean of information and get more information about staff contact web base management systems.

The researcher accessed information on staff contacts web base management systems from the Internet for competitive advantage in immigration and looked at how they are issue which

certainly help in designing the proposed system and redesigning the forms to suit the staff contact web base data base information systems.

3.5 Data Analysis Methods

Data were collected using different methods and were compared so as to give the researchers a clear understanding of the problem. Data were sorted to get a clear picture of what was to be the inputs and the expected outputs and reports.

3.6 System design

Under this, the main objective was made a preliminary (logical) design and then a details Physical design. The logical designs were described the functional capabilities of the new system as well as the requirements specifications. The physical design was illustrated how the proposed system were delivered the general capabilities, the output and input requirements, the processing requirements as well as the security control and backup.

3.6.1 Functional capabilities of the new system

❖ Improved security and access controls over staff contact web base management system

❖ Provides better services to the clients and administration

❖ Allows regular updates

❖ Provide accurate and timely information needed by the administrators as well as staff

❖ Increase throughput and decrease the response time.

3.6.2 System requirements specification

This described the requirements and needs for the information system to give or produced an output. The requirements were divided into functional requirements and non functional requirements. The functional requirement included all the features and functions which were included into the system for it to produce the specifications. The non functional requirements were mainly defined by the user and were not included in the system.

Functional requirements included;

❖ The system was able to output the information as requested by the user in short time.

❖ The system was reliable, portable. Compatible, and usable.

Non function requirements include;

❖ The development cost and user training cost was cheap.

❖ The system was completed in the agreed time.

❖ The system was able to respond fast and in a short time.

FINDINGS, PRESENTATION AND ANALYSIS

4.0 Introduction

This chapter presents the analysis of the data gathered and interpretation thereof. It gives the socio-demographic characteristics of the respondents and description of the objectives of the project.

Table 2 showing the profile of the respondents

Category	Frequency	Percentage
Gender		
Male	30	60
	20	40
Female	**50**	**100**
Total		
Age	30	60
	20	40
20-29	0	0
30-39	0	0
40-49	**50**	**100**
Above 50 years		
Educational Level		
Certificate		
Diploma	0	**0**
Degree	10	**10**
Masters	40	**90**
Total	0	**0**
	50	**10**
Work Experience	40	90
1-2 years	10	10
2-4 years	0	0
Above 5 years	**50**	**100**
Total		

Source: **primary data, 2013**

According to Table 2, the research findings revealed that majority (60%) of the respondents were male while 40% of the respondents were female. This is an indication that the male employees are dominant at Immigration Department. This could be because the female are not yet so well exposed with the usage of computer systems.

The same Table also revealed that majority (60%) of the respondents were within the age group of 20-29 years while 40% of the respondents were within the age group of 30-39 years. There were no respondents with age group above 40 years. This means that the employees at the Immigration Department are dominated by the youngsters. This could be because the employers of today find it easier to work with the young generation compared to the older groups.

According to Table 2, the research findings also revealed that majority (90%) of the respondents were degree holders while only 10% of the respondents were diploma holders. None of the respondents had a certificate or a master's qualification. This means that at Immigration Department, most of the employees are well educated to manage the Staff Contact Web base management system.

Finally the research findings in Table 2 also revealed that majority (90%) of the respondents had worked for only 1-2 years and 10% of the respondents had worked for 2-4 years. This means that most of the employees at Immigration are still fresh in the organization with very little experience in how to operate or manage and maintain a pharmacy information management system.

Table 3 showing if the System is Stand alone or Network

Is the current system stand alone or networked?	Frequency	Percentage (%)
Standalone	50	100
Networked	0	0
Total	**50**	**100**

Source: **primary data, 2013**

According to Table 3, the research findings revealed that all (100%) of the respondents Acknowledged that the system they used was standalone and not networked. This could be because the system probably was not upgraded to support network capabilities.

Table 4 Showing if the Current System is Efficient

How efficient is the current system?	Frequency	Percentage (%)
Very tiresome	10	20
Slow	30	60
Fast	10	20
Total	**50**	**100**

Source: **primary data, 2013.**

Indications from Table 4 showed that majority of the respondents confirmed that the system they used is slow. 20% of the respondents however had a different view of the efficiency of the system they used.

Table 5 Showing the Performance of the System in Use

How do you rate the performance of the current system	Frequency	Percentage (%)
Good	40	70
Fair	10	20
Not impressive at all	5	10
Total		100

Source: **primary data, 2013**

Revelation from Table 5 showed that majority (90%) of the respondents rated the performance of the system they used as fair while only 10% indicated that the performance of the system was not impressive. This is truth enough that the system in use is not up to date and therefore there is need either to upgrade it or replace it with a perfect and new pharmacy management information system.

Table 6 showing system authentication

Does the system authenticate authorized users of the system?	Frequency	Percentage (%)
YES	30	60
NO	20	40
	5	100

On whether the system in use authenticate authorized users, the findings from Table 6 showed that majority (100%) of the respondents confirmed that the system uses authentications for authorized users. This could be because of security reasons.

Table 7 showing system capability

Does the system enable the staff to capture and store details about users, staff a vailable, entry & place of work,dates and email, re port statements?	Frequency	Percentage (%)
YES	40	90
NO	10	1
TOTAL		100

Source: primary data, 2013

Revelation from Table 7 showed that majority (90%) of the respondents confirmed that the system had the functionality of allowing the staff to capture and store details about users, staff available, their entry dates and report staff details. However 10% of the respondents could not confirm in totality such claims. This could be because though the system could perform such capabilities, it is still limited in some way. Probably its reporting capability might not be as efficient as expected.

Table 8 Showing if the System Generates Staff Details

Does the system generate reports about billing details?	Frequency	Percentage (%)
YES	0	0
NO	50	100
Total	50	100

Source: primary data, 2013

According to Table 8, the research findings revealed that 100% of the respondents indicated (**NO**) in revelation that the system does not have the reporting capability of reporting staff details information. This means that though the system in place is computerized, it still has limited functionalities.

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Table 9 Showing if the Current System is User Friendly

Is the current system user friendly and a esy to learn?	Frequency	Percentage (%)
YES	40	90
NO	10	10
Total	**50**	**100**

Source: primary data, 2013

Majority (90%) of the respondents according to Table 9 seemed to note that the system they used was user friendly while only 10% of the respondents were opposed to that fact. This means that the system in use is quite user friendly though it could be good if the users are trained on how best the system operates.

User Requirements for the new System

When the respondents were requested to indicate in their own opinions the new requirements that could be implemented in the new system, this is what they had to say. The researcher summarized them as below in different categories:

Functional requirements

- The system should authenticate authorized users of the system.
- The system should enable the administrator to capture and store details about

users and staff details.

- The system should enable users capture, store and retrieve records on the staff

Available at each location of the workplace

- The system should be in position to display report details of each staff information

Non functional requirements

- The system should be user friendly and able to capture and retrieve information

very fast.

- The system should be easy to maintain
- The system should run on different platforms and work with other existing

systems.

- The system should have high performance levels, reliable, efficient and secure
- The system should provide a fast response time
- The system should be user friendly that is easy to learn by novice

4.5.1 Data conversion

The data from the old system were transferred safely to the new system. This was done by; Users enter data to the new system through page updating process.

4.5.2 Installation and change over

This stage was involved the following;-

1. Installation on site. Here the hard ware was bought on site, the software was installed (this included operating system and the new system).
2. Site commissioning. Here the system was installed on site, connected to any other third party component; commissioning tests run to identify discrepancies between interfaces, until the system works without any problem.

With system change over, direct method was used. It occurred at a given time one system ends. And a replacement starts immediately. The advantage was that, it was cheapest and there was clear break down between the old and the new system. This system does not operate on its own dependence, but the database management system software installed first then followed by the new system.

4.5.3 User training

All the users of the new system were trained on how to use the new system. This was conducted using projected on screen presentation. Training was the most interesting part of the study. The administrator was the first in the training and then the workers followed. The administrator was given details than the workers to ensure that the users do what they are supposed to do than going into details.

CHAPTER FIVE

ANALYSIS AND DESIGN

5.0 Introduction

This chapter concentrates on the analysis and interpretation of data collected. This section of the system analysis, design and interpretation illustrates the flow of data of the expected system extracted or diverted from the existing arrangement of service.

Development in which system hardware and software are required developed and installed, the system is tested and documented. People are trained to operate and use the system, and an organization changes to the use of a newly developed system.
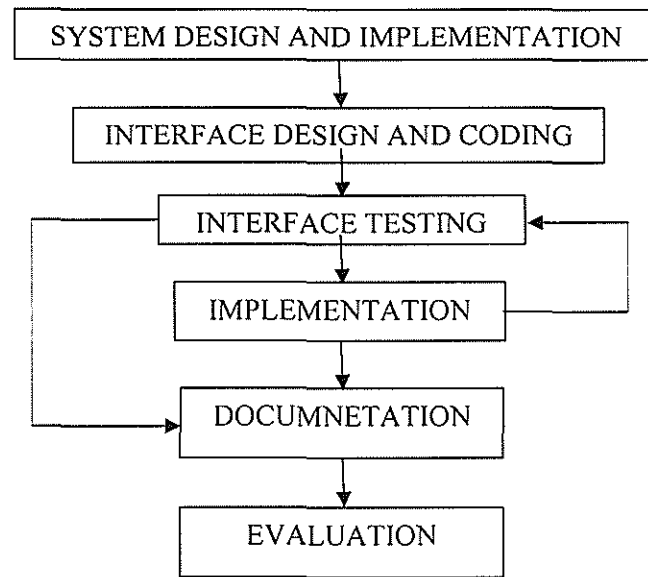
5.1 Data analysis and interpretation

The interviews of research were centered on the existing file system studied plus the observation of the organization that paved a way for the appropriate conclusion of the new development and implementation of a computerized staff contact web base management system.

5.2 System design

This sub-section resulted after a persuasion that a new system was worthy building; further investigation made to determine what inputs, processes, and out puts was required

System design is the process or art of defining the hardware and software architecture, components, modules, interfaces and data for a computer system to satisfy specified requirements. One could see it as the application of system theory to computing. Some overlap with discipline of system analysis appears inevitable. On the other hand implementation is coding. Putting a planned system into action.

Nevertheless, the following steps of system design and implementation were applied

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│   SYSTEM DESIGN AND IMPLEMENTATION       │
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                    ▼
        ┌───────────────────────────────┐
        │  INTERFACE DESIGN AND CODING   │
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    ┌──────▶│  INTERFACE TESTING  │◀──────┐
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    │               ▼                     │
    │       ┌─────────────────┐           │
    │       │ IMPLEMENTATION  │───────────┘
    │       └─────────────────┘
    │               │
    │               ▼
    │       ┌─────────────────┐
    └──────▶│  DOCUMNETATION  │
            └─────────────────┘
                    │
                    ▼
            ┌─────────────────┐
            │   EVALUATION    │
            └─────────────────┘
```

5.2.1 Database design

The method that was used in the design of the database system limitations of the relational database modeling (RDBM).

This system implements the staff's contact details, records.

5.2.2 Design technique

The procedures used in the database design include the E-R modeling of the entities, attributes and later relationships, validation of tables or attributes.

The data modeling design technique that was used to achieve the new system include; E-R diagrams, data dictionary, dataflow diagrams, relationships among tables.

5.2.3 Entity-Relationship Diagrams (ERD)

Data models are tools used in analysis to describe the data requirements and assumptions in the system from a top-down perspective. They also set the stage for the design of databases later on in the SDLC.
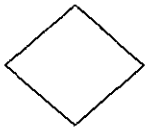
There are three basic elements in ER models.

Entities are the "things" about which we seek information.

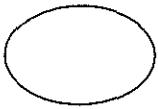**Attributes** are the data we collect about the entities.

Relationships provide the structure needed to draw information from multiple entities. The following symbols are used in developing an ER diagram;
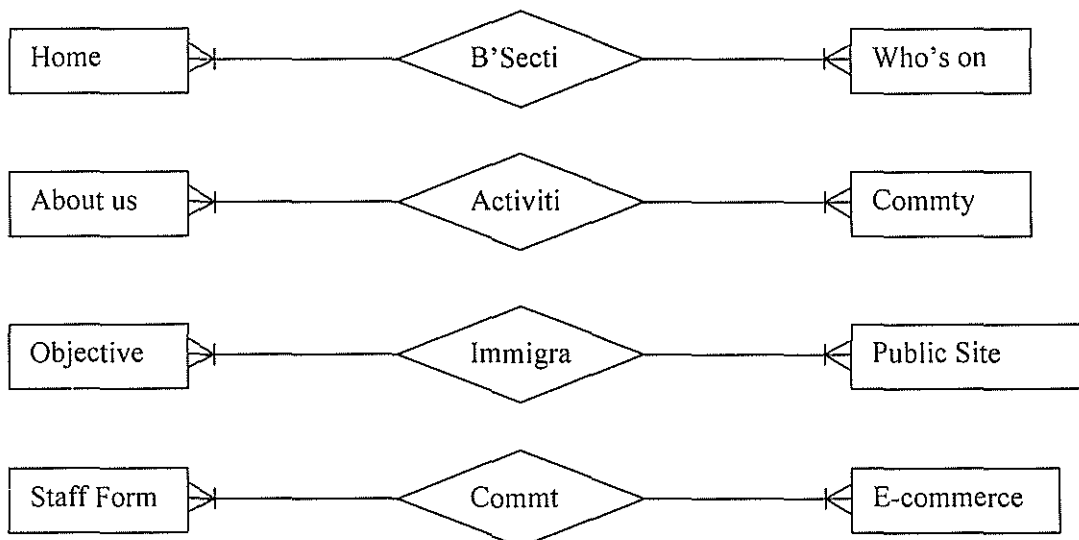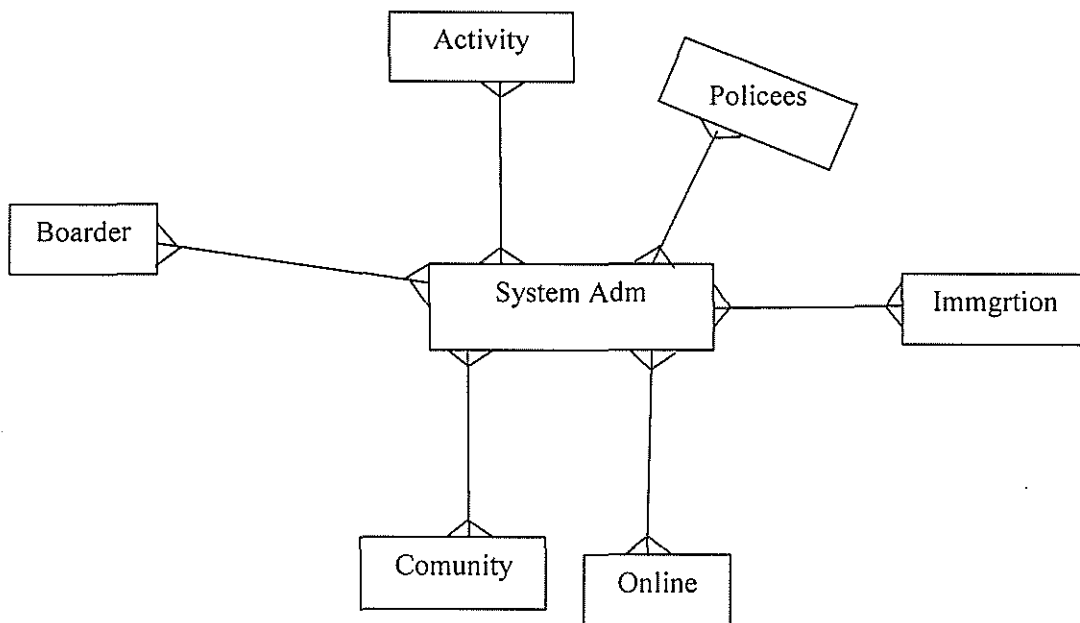
Donates an entity

Donates a Relationship

Donates an Attribute

5.2.4 E-R model for management system

Home	B'Secti	Who's on

About us	Activiti	Commty

Objective	Immigra	Public Site

Staff Form	Commt	E-commerce

The E-R model helped me as a designer to accurately capture the real data requirements needed because it looks at semantic details and data relationships that are to be provided by the DFD, E-R diagram that culminated into the process of data design.
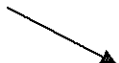
The symbols used in this process included;

 Rectangle-denotes an entity
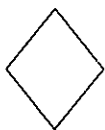
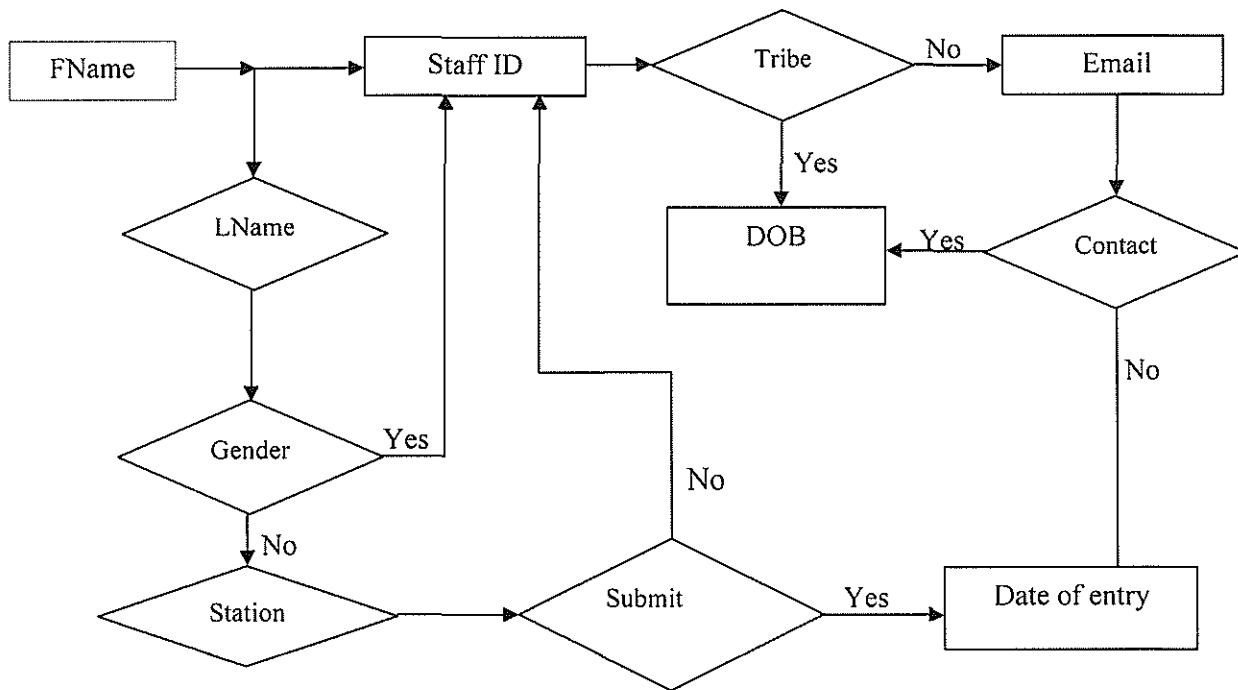 **Decision** - table denotes a decision which can be either arithmetic or mathematical expression

 Arrow - denotes the direction taken by data

The above are symbols of the E-R diagram for Immigration Point and department.
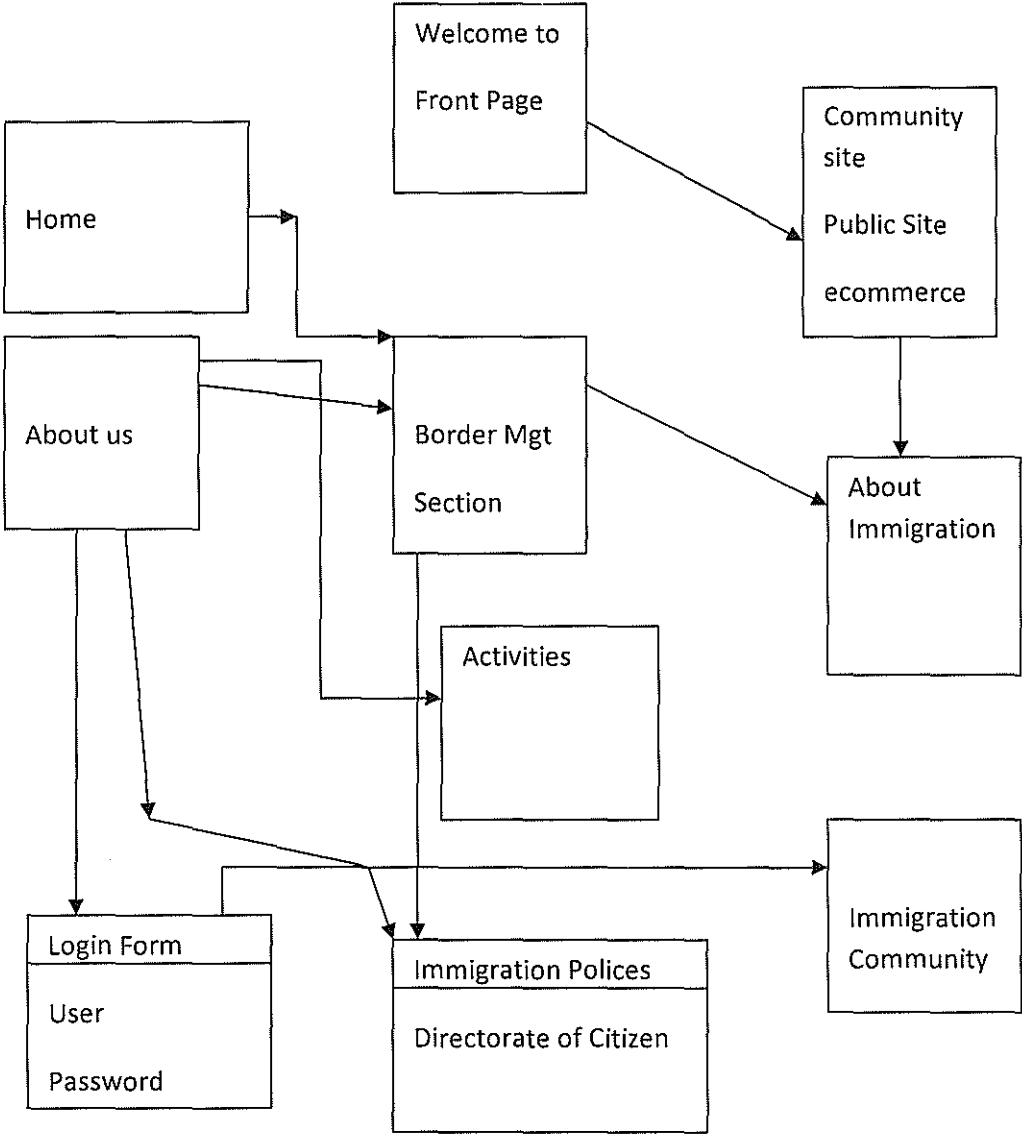
5.2.5 Data flow diagram

The dataflow diagram for staff Registration Form is as this one below

As a system designer, the dataflow diagram has helped me to determine the flow of all documents and the movement of staff made from the time of the posting to the time of either referral or treated.

5.2.6 Relationships among tables

5.2.7 Interface Design and Implementation

The interface design are displayed to demonstrate how information is input and output in the system

How to input and out put

The qualities of the interfaces for outputting information should depict the following

1. User friendly
2. Simple click event
3. Easy to manage
4. Staff web base management system for record keeping

Figure 1 User manageable interfaces

5.3 Immigration Staff Site Tables

The couple of tables that were used in the development and design of this project include;

Table 1 Staff Main Menu, User Menu and Login Table

Home: This helps user to view the Immigration staff site and select where they want to go .

About Us: This helps user to view and know more about the staff site.

Objectives: This helps user to navigate the key strategic objectives.

Staff Registration Form: This helps and provides information about staff by filling form.

Staff Members: This helps user to view staff members' details in the web base and record store.

Login: This helps the administrator to login.

Username: This helps to look for any record in the database.

Password: This button gives provision of a password to be entre.

Remember me: This button helps user to remember their password.

5.3.1Table 2 about Ministry Table

5.3.2 Staff Country View Site form

This is the interface indicates the staffs site beautiful photo entry you click to use those forms/Interfaces and again it has the key that exits and close down the whole system.

Table 3 *Staff Country View Site form*

5.3.3 about Different Department Table

This is interface that is used to enter and store data about the section. It has the navigation buttons that are used for the various functions and help have access to any data in the database.

Table 4 About Different Department Names

5.3.4 Site Beautiful Photos form

This is interface that is used to help you view animals within the country. It has the navigation buttons that are used for the various functions and help have access to any data in the database.

Table 5 Site Beautiful Photos form

5.3.5 Staff Registration form

This form show how the detail of the staff should be entry in the form and submit

Table 6 *Staff Registration form*

5.3.6 Staff Members form

It indicates the staff id, Fname, LName, Gender, DOB, and Date of employment, Station, Tribe, Email, Contact and date of Entry of all staff in the Ministry of Internal Immigration Department.

Table 7 *Staff Members form*

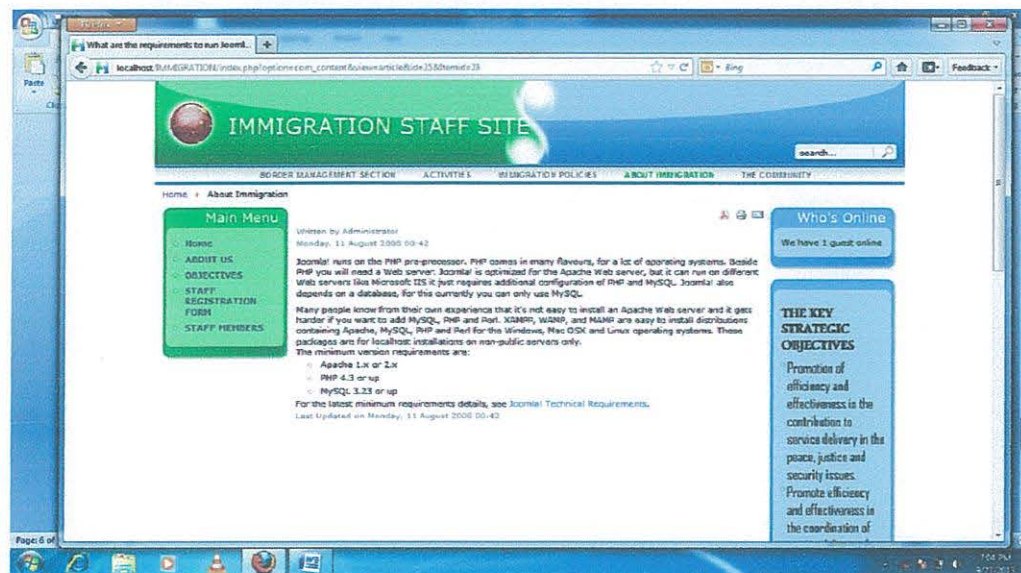## 5.3.7 Directorate of Citizenship and Immigration Control form

The form indicates where the Immigration is allocated to where room number and the name of the building.

Table 8 Directorate of Citizenship and Immigration Control form

5.3.8TABLE 3 Immigration Community Table

Table 9 About Immigration Community

CHAPTER SIX

SYSTEM EVALUATION, RECOMMENDATION, FURTHER AREAS OF IMPROVEMENT AND CONCLUSIONS

6.0 System Evaluation

The old system were evaluated and found to have some pitfalls and lacked effectiveness and efficiency in the following areas.

Data recording speed. The old system of using manual recording takes time while workers tend to look for different recording places. There was data validation, as a result the department prone, errors leading to misconceptions, loss of funds and other inconveniences associated with lack of record keeping. It was in this context therefore the designer designed a new computerized system which as a result can improve the speed of data recording, security to mention but a few.

6.1 Limitations

Factors such as finance for the purpose of software sources e.g., joomla software, photosoap, RSForm,jumi and template software and the time factors like printing costs photocopying costs and transport . During data collection, researchers tried to obtain the right full information and therefore there was proper check up for information from many users and administrators.

6.2 Problems encountered

During the overall stages of the system development, there were a number of problems which were encountered. This was illustrated as below;

> The case studies was very far implying that moving up to where it is located involved lots of costs in transport as well as other expenditures.

> Lack of full knowledge over the joomla software designer, templates, RSForm, Potosoap.

> Power fluctuations especially during the design phase of the interfaces.

6.2.1 Solutions to problems

However these problems were solved as follows;-

> Self financing of the system design development and implementation.

> There was training in joomla software designer, templates, RSForm, Potosoap, for two weeks.

> Creation of back up files on CDS FLASH DISCS and other devices.

To a great extent the designers worked hard and because of determination of the designers then the system were developed.

6.3 System maintenance.

Due to the need of the system in a short time a system was not produce some functionality like balances and producing weekly reports and many.

6.4 Recommendation

The system was installed well and further the database management system was also installed. The system was highly recommended being use in Immigration Reception for effective process and retrieval of staff as well as staff information. It was build with joomla software.

Conclusion

With the entire above the system was fully fill the user specifications as well as meeting the organization's requirements. The system may be found to have some pitfall; however it can produce the specification. The ineffective components may need to be improved as long as needed by the administrator.

Appendix A budget

TASK	QUANTITY	Unit price	AMOUNT
Photocopying papers	2	15000	30.000
Pens	5	1000	5000
Note books	3	3000	9000
Pencil	1	1000 @	1,000
Flash disk	8GB	80.000@	80,000
Ruler	1	1000	1,000
Internet	10 days	5000	50.000
Secretariat	5 times	15000	75000
Research Assistant	4	5000	20.000
Transport	2		250.000
Supervisor	1		120.000
Airtime	2		20,000
Printing	3	20.000	60,000
Binding	3	10.000	30.000
Transport	5	10.000	50.000
Airtime	5	10.000	50.000
Grand Total			931.000

Appendix: B Timeframe

	Jan	Jan – Feb	Feb - march	march- June	June
Proposal writing	■				
Data collection and analysis		■			
Project design			■		
Project coding				■	
Project report writing and submission					■

APPENDIX: C INTERVIEW GUIDE

Dear Respondents,

We are students of Kampala International University pursuing a Degree in **information technology and information management system**. We are investigating Staff Contact Web base Management System at a Immigration Department. These questionnaires are designed to collect information purely for academic purposes.

Yours faithfully,

....

Arwai Daniel

BIT/27203/102/DU

Ayo Sanford

....

BIS/32690/102/DU

.

SECTION A

Please put a tick (√) inside the box that corresponds to your answer.

Back ground of correspondent

1. How old are you?

Under 20 years	☐	40 – 44 years	☐
20 – 24 years	☐	45 – 49 years	☐
25 – 29 years	☐	50 – 54 years	☐
30 – 34 years	☐	55-59 years	☐
35 – 39 years	☐	60 and above	☐

2. Identify your gender

Male ☐   Female ☐

3. Which department of respondents do you belong to (where applicable?)

Policy maker ☐

Human Resource ☐

System administrator ☐

Records Section ☐

Finance ☐

4. What is your Educational background (qualification?)

'O' level	☐	Bachelor's level	☐
'A' level	☐	Masters level	☐
Diploma	☐	others	☐

SECTION B

About the Immigration Department

5. How many years have you serviced in the department?

Less than 1 year ☐   6 – 10 years ☐

1 – 2 years ☐   over 10 years ☐

3 – 5 years ☐

6. What kind of staff web base management system is used in the department?

File based system ☐   automated system ☐

7. If it is a file based system what are the problems accounted?

....
....
....
....

8. How can we improve on the file based contact web base management system?

....
....
....
....

9.   What are the measures being taken to improve staff contact we base management
        system?

        ....

        ....

        ....

        ....

10. In your own view, what could be the challenges of the above systems?

    .

        ....

        ....

        ....

        ....

11. How secure is the record or information in the department when using the current
    system.

        ....

12. What are the benefits of using staff contact web base management system?

        ....

13. What are the limitations, advantage and disadvantages of using stsff contact web
    base management system?

        ....

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